

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims:

Listing of Claims:

1-9. (Canceled)

10. (Currently amended) The A repeater unit of claim 8 comprising:

at least one receiver module responsive to an infrared signal;

a controller unit adapted to determine whether a signal based on the infrared signal corresponds to a remote control signal;

wherein the at least one receiver module comprises a first receiver module, tuned to a first carrier frequency, that receives the infrared signal and is configured to generate a first signal based on the infrared signal; and

a second receiver module, tuned to a second carrier frequency, that receives the infrared signal and is configured to generate a second signal based on the infrared input signal,

wherein the infrared signal comprises at least one of a noise input and the remote control signal,

wherein the controller unit is adapted to distinguish between the noise input and the remote control signal,

wherein the controller unit generates an output signal that corresponds to the remote control signal if the controller unit determines that at least a portion of the first signal or the second signal corresponds to the remote control signal, and

wherein the output signal generated by the controller unit comprises at least one of a remote control signal having the first carrier frequency and a remote control signal having the second carrier frequency.

11. (Original) The repeater unit of claim 10, wherein the output signal is based on the remote control signal having the first carrier frequency and the remote control signal having the second carrier frequency.

12. (Original) The repeater unit of claim 11, wherein the output signal comprises the result of a logical OR operation performed on the remote control

signal having the first carrier frequency and the remote control signal having the second carrier frequency.

13. (Currently amended) The A repeater unit of ~~claim 1~~ comprising:
at least one receiver module responsive to an infrared signal; and
a controller unit adapted to determine whether a signal based on the infrared
signal corresponds to a remote control signal,

wherein the at least one receiver module comprises a wideband receiver module adapted to generate the signal based on the infrared signal.

14. (Currently amended) The A repeater unit of ~~claim 1~~ comprising:
at least one receiver module responsive to an infrared signal; and
a controller unit adapted to determine whether a signal based on the infrared
signal corresponds to a remote control signal,

wherein the at least one receiver module comprises a narrowband receiver module configured to generate a signal that corresponds to a portion of the infrared signal.

15. (Currently amended) The A repeater unit of ~~claim 5~~ comprising:
at least one receiver module responsive to an infrared signal; and
a controller unit adapted to determine whether a signal based on the infrared
signal corresponds to a remote control signal,

wherein the at least one receiver module comprises a first receiver module,
tuned to a first carrier frequency, that receives the infrared signal and is configured
to generate a first signal based on the infrared signal, and a second receiver module,
tuned to a second carrier frequency, that receives the infrared signal and is
configured to generate a second signal based on the infrared input signal, and

wherein the first and second receiver modules comprise wideband receiver modules configured to generate signals based on the infrared signal.

16. (Currently amended) The A repeater unit of ~~claim 5~~ comprising:
at least one receiver module responsive to an infrared signal; and

a controller unit adapted to determine whether a signal based on the infrared signal corresponds to a remote control signal,

wherein the at least one receiver module comprises a first receiver module, tuned to a first carrier frequency, that receives the infrared signal and is configured to generate a first signal based on the infrared signal, and a second receiver module, tuned to a second carrier frequency, that receives the infrared signal and is configured to generate a second signal based on the infrared input signal, and

wherein the first and second receiver modules comprise narrowband receiver modules that are configured to generate a first signal and a second signal that correspond to a portion of the infrared signal.

17. (Currently amended) The A repeater unit of claim 5 comprising:
at least one receiver module responsive to an infrared signal; and
a controller unit adapted to determine whether a signal based on the infrared signal corresponds to a remote control signal,

wherein the at least one receiver module comprises a first receiver module, tuned to a first carrier frequency, that receives the infrared signal and is configured to generate a first signal based on the infrared signal, and a second receiver module, tuned to a second carrier frequency, that receives the infrared signal and is configured to generate a second signal based on the infrared input signal, and

wherein the controller unit:

determines if the first signal based on the infrared signal is a valid remote control signal by determining if the first signal corresponds to one of the remote control signals, or

determines if the second signal based on the infrared signal is a valid remote control signal by determining if the second signal corresponds to one of the remote control signals; and

generates a signal that corresponds to one of the remote control signals, if the controller unit determines that either the first signal or the second signal is a valid

remote control signal, by adding either a fixed carrier frequency, or a multi frequency signal to either the first signal or the second signal.

18. (Original) The repeater unit of claim 17, wherein the controller unit determines if the first signal corresponds to one of the remote control signals by measuring a pulse width of the first signal, and determining if the pulse width of the first signal is greater or less than a predetermined duration that corresponds to a duration of a carrier of one of the remote control signals.

19. (Original) The repeater unit of claim 18, wherein the controller determines that the second signal corresponds to one of the remote control signals by measuring a pulse width of the second signal, and determining if the pulse width of the second signal is greater or less than a predetermined duration that corresponds to a duration of a carrier of one of the remote control signals.

20. (Currently amended) The A repeater unit of claim 19 comprising:
at least one receiver module responsive to an infrared signal; and
a controller unit adapted to determine whether a signal based on the infrared
signal corresponds to a remote control signal,

wherein the at least one receiver module comprises a first receiver module,
tuned to a first carrier frequency, that receives the infrared signal and is configured
to generate a first signal based on the infrared signal, and a second receiver module,
tuned to a second carrier frequency, that receives the infrared signal and is
configured to generate a second signal based on the infrared input signal,

wherein the controller unit:
determines if the first signal based on the infrared signal is a valid remote
control signal by determining if the first signal corresponds to one of the remote
control signals, or

determines if the second signal based on the infrared signal is a valid remote
control signal by determining if the second signal corresponds to one of the remote
control signals; and

generates a signal that corresponds to one of the remote control signals, if the controller unit determines that either the first signal or the second signal is a valid remote control signal, by adding either a fixed carrier frequency, or a multi frequency signal to either the first signal or the second signal,

wherein the controller unit determines if the first signal corresponds to one of the remote control signals by measuring a pulse width of the first signal, and determining if the pulse width of the first signal is greater or less than a predetermined duration that corresponds to a duration of a carrier of one of the remote control signals,

wherein the controller determines that the second signal corresponds to one of the remote control signals by measuring a pulse width of the second signal, and determining if the pulse width of the second signal is greater or less than a predetermined duration that corresponds to a duration of a carrier of one of the remote control signals, and

wherein the controller unit determines that either the first signal or the second signal corresponds to one of the remote control signals, even though the pulse width of the first output signal or the second signal is less than the predetermined duration, if the first signal and the second signal are simultaneously active.

21-25. (Canceled)

26. (Currently amended) The A repeater unit of claim 5, further comprising:

at least one receiver module responsive to an infrared signal;

a controller unit adapted to determine whether a signal based on the infrared signal corresponds to a remote control signal,

wherein the at least one receiver module comprises a first receiver module, tuned to a first carrier frequency, that receives the infrared signal and is configured to generate a first signal based on the infrared signal, and a second receiver module, tuned to a second carrier frequency, that receives the infrared signal and is configured to generate a second signal based on the infrared input signal, and

a third receiver module, tuned to a third carrier frequency, that receives the infrared signal and is configured to generate a third signal based on the infrared input signal.

27. (Original) The repeater unit of claim 26, wherein the third carrier frequency is centered about 455 kHz.

28-29. (Canceled)